1979

Sheep Flock Management

H. L. Miller
South Dakota State University

SHEEP FLOCK MANAGEMENT

H. L. Miller

Department of Animal Science
Cooperative Extension Service

South Dakota State University
A.S. Series 79-14

In South Dakota and the United States, there is an increasing interest in sheep production. With slaughter lamb prices reaching $70 per hundredweight and above and yearling ewes $95 to $125, the importance of management is of greater economic value. Since there is little difference in ewe cost to raise twin lambs or a single lamb, the total management scheme from before breeding to lamb marketing is important. With this in mind, let us review some management techniques to increase flock profits.

Prior to Breeding

Total cost to maintain a ewe for 1 year at present prices normally ranges from $50 to $55. Therefore, a strict culling procedure should be implemented to recognize low producing ewes and eliminate them from the flock as early as possible. There are several criteria for culling ewes. Open ewes can be detected relatively early in the gestation period with the use of pregnancy-detecting instruments recently designed for sheep. The cost of these instruments is readily recovered when the expense of maintaining an open ewe is considered. The joint purchase of pregnancy testers by several producers also considerably reduces the cost. Late lambing ewes result in lamb crops strung out over a longer period of time. Many times these late lambs do not get the management techniques associated with the earlier lambs, resulting in decreased profits. Old ewes that should have been culled, but due to replacement costs have been kept for an additional lamb crop, may result in a liability. This is especially true if they are not able to winter well. Unsound ewes should be culled on an annual basis. This includes ewes that do not milk well, have bad udders or eyes or are unsound structurally.

A good flushing program will return more than many other management practices. If properly implemented, flushing should increase lambing percentage 15 to 30%. Flushing is the practice of increasing the nutrient intake prior to mating (17 days in ewes), causing an increase in body weight. Ewes in average condition respond the best to flushing. Fat ewes show little, if any, response to a flushing program. There are several methods used to flush ewes. One is to turn ewes into a lush pasture (stubble fields work well, also). If a good pasture is not available, about 1/2 pound of grain per head per day works well. Start flushing 17 days before turning the ram with the flock and continue an additional 17 days after letting the ram with the ewes. Drenching the ewes before breeding has been shown to slightly increase lambing percentage. This is probably due to decreasing the parasitic burden, resulting in a flushing type response.

Prepared for Sheep Day, June 8, 1979.

The ram is also important when considering profit potential of the flock. Rams should be in good condition, vigorous and healthy. Allow three rams per 100 ewes under range conditions and two rams per 100 ewes when pen mating or when small pastures are being utilized.

Breeding

The breeding season should not exceed 60 days. It is desirable for the breeding season to be considerably shorter, 40 to 50 days.

Temperature has a pronounced effect on semen quality. When environmental temperature exceeds 90^{o} F. for extended periods, ram fertility will be reduced. Any condition that results in elevated body temperature (fever, fly strike, extreme exercise) may also reduce ram fertility.

There are several management techniques that can be utilized to increase reproductive performance during elevated ambient temperature. However, under certain conditions, some of these techniques may not be practical. It is a good practice to provide shade or air movement during hot days and use the rams at night when it is cooler. Good nutrition and maintaining rams in a parasite- and disease-free condition improves fertility. Also, rams should be sheared before breeding. Once the breeding season is over, rams should be removed from the flock and remain separated until the next breeding season.

Before Lambing

One of the major factors in the nutrition of the pregnant ewe is that of the unborn lamb. The gestation period for the ewe is short compared to many other animals. The fetal demand for nutrients is at its greatest during the last 6 to 8 weeks of gestation. About two-thirds of the birth weight of a fetus is gained during the last 6 weeks of pregnancy. Feed some grain in the ration during the last 4 to 6 weeks of gestation to provide an additional supply of energy to meet the demands of the rapidly developing fetus. A ewe should gain from 20 to 30 pounds during pregnancy.

Pregnancy Toxemia (ketosis, lambing disease) is a highly fatal disease occurring during the last month of pregnancy, normally in ewes carrying two or more lambs. Death occurs in 2 to 10 days in about 80% of the cases. It is usually caused by ewes being undernourished or under fed during the last month of pregnancy. Also, ewes well nourished that are not fed during periods of storms or stress can develop the condition.

During the last 4 to 6 weeks of gestation, start feeding 1/2 pound per day of corn, increasing to 1 pound per day before lambing. A legume or mixed hay should be fed at the level of 3 1/2 to 4 1/2 pounds per day at this time. Silage can be substituted for hay at the approximate rate of 2 to 3 pounds, depending upon the moisture content. When silage is fed, grain does not need to be added. However, silage will be deficient in protein and calcium so a protein-mineral supplement should be added unless half the roughage is legume hay.

Lambing

Lactation represents the time nutrient requirements are the highest

for ewes. After 2 months of lactation, milk production decreases as does nutrient requirements. Ewes nursing twin lambs have higher nutrient requirements than ewes nursing single lambs. Keeping ewes with twin lambs separated from ewes with single lambs and feeding more to ewes with twins is a good management practice.

Ewes with twin lambs should receive 5 to 6 pounds of alfalfa hay and 1 3/4 to 2 pounds of corn, depending on the size of the ewe. Ewes with singles can be fed the same amount of hay but about .5 pound less of corn. If a low quality roughage is fed instead of alfalfa hay, increase the grain slightly and add .1 pound of soybean meal.

Vitamin A deficiency is likely to occur when ewes have been fed poor quality roughage for extended periods of time. Supplement 6.0 mg. of carotene or 2,400 I.U. vitamin A per 100 pounds of body weight or give vitamin A injections.

Attending the flock at lambing time will result in good returns. Ewes should be checked every 2 to 3 hours during lambing.

To decrease the incidence of navel ill, apply a 7% tincture of iodine to the navel at birth.

Lambing pens or "jugs" will result in less lambs being disowned. Four- to 5-foot square pens are the recommended size, depending on the size of the ewes. Heat lamps may be used but should be used safely and sparingly.

Care should be used when docking and castrating. Many instruments are available for both procedures. Remember to disinfect instruments between animals. Both docking and castrating are traumatic to the animal and should be done at an early age. Make sure both procedures are done before the lamb is 2 weeks of age.

Some method of identification is necessary to easily identify ewes and their lambs. Ear tags or paint numbers work nicely. Any record keeping system depends upon a good identification system.

Weaning

In most instances, if the lamb is to be finished immediately after weaning, it is a good practice to wean the lamb at about 2 months of age. To decrease the incidence of udder problems, eliminate all grain 2 weeks before weaning. Start reducing hay and water 3 to 4 days prior to weaning.

Feeding Lambs

Creep feeding lambs is a means of providing supplemental feed to young lambs during the nursing period. Lambs may begin to nibble creep rations when they are several days old but will not consume significant amounts until they are a month of age.

Keep the creep area clean and well bedded. Many producers like to keep a light in the creep to attract lambs. Provide grain, hay and a source of water in the creep at all times. For young lambs the creep ration should be ground or cracked unless a pelleted ration is used. Once

the lambs are 6 to 8 weeks of age, whole grains may be used unless they are extremely hard. Hay should be ground to decrease waste.

Best results are reported when creep rations contain at least 15% protein. Antibiotics at the rate of 30 grams per ton are recommended. Aureomycin (chlortetracycline) and terramycin (oxytetracycline) are the two most commonly used antibiotics.

The best financial returns are obtained from creep feeding lambs that have been born early. Most of these lambs will be sold in May or June when lamb prices are usually higher than in the summer or fall. Creep feeding also works best when the twinning percentage is high and lambs have the inherited ability to gain rapidly.

Urea should not be used in rations for very young lambs or in creep rations. The rumen is not functioning completely and cannot utilize urea until the lamb is 6 to 7 weeks of age.

Nonprotein nitrogen sources should not be used in range sheep rations or in lamb rations when lambs are on limited feed. A period of rumen bacterial adaptation is required for effective urea utilization. Little benefit is observed during the first 2 to 3 weeks of urea feeding. When urea is fed, lower feed intake occurs and, consequently, slightly lower gains may result.

Many different grain sources and combinations can be used in a finishing ration. The primary importance of the grain source is the cost of the major energy supply. All alternative energy sources should be considered in minimizing ration energy. The relative ranking according to feed value of certain selected grains is shown below:

Energy Source (Compared to corn with a value of 100)	Relative Energy Value %
Corn	100
Milo	85-100
Barley	90
Oats	80
Wheat (can feed up to 50% of grain portion of ration)	100-110
Molasses (70% dry matter content; up to 10% of ration)	70

Lambs should be started (creep fed) on a 15 to 16% protein ration. As the lambs mature and become larger, this can be gradually decreased to about 12% when they weigh 80 to 85 pounds. They should then be fed a 12% protein ration until they are marketed.

When feeding alfalfa hay-grain rations in about equal proportions, calcium and phosphorus levels will probably be adequate. However, feeding high-grain rations may result in deficient calcium, and urinary calculi (water belly) may result. Adding 1.5% limestone to high-grain rations will prevent most urinary calculi problems. It is a good idea to feed a .5% trace mineralized salt in rations, particularly a high-grain ration.

A good health program is essential for maximum profits. Sheep Health - An Update by Dr. G. F. Kennedy on page 51 offers many helpful health hints.